

EXHIBIT A
Joint Claim Constructions and
Citations to Intrinsic and Extrinsic Evidence

U.S. Patent No. 6,453,595 ('595 Patent)
U.S. Patent No. 8,707,608 ('608 Patent)
U.S. Patent No. 8,966,806 ('806 Patent)

Claim Term	Claim Nos.	Plaintiffs’ Proposed Claim Construction	Plaintiffs’ Intrinsic and Extrinsic Evidence	Defendant’s Proposed Claim Construction	Defendant’s Intrinsic and Extrinsic Evidence
Reticle	'595: 1 '806: 1, 3, 27, and 29 '608: 1, 3, 27 and 29	Component in the eyepiece of an optical instrument comprising markings used to establish scale or position.	<i>Intrinsic evidence:</i> U.S. Patent No. 6,453,595 – (1) Abstract – “An improved telescopic gunsight is provided by combining a conventional telescopic gunsight with a reticle having a primary vertical cross-hair, a primary horizontal cross-hair intersecting the primary vertical cross-hair, a plurality of secondary horizontal cross-hairs having predetermined thickness evenly spaced a predetermined distance along the primary vertical cross-hair, a plurality of secondary vertical cross-hairs having predetermined thickness evenly spaced a predetermined distance along at least some of the secondary horizontal cross-hairs and an optical range-finder for quickly determining the range to the intended target. Some of the secondary horizontal cross-hairs are marked with a unique identifying character to assist the shooter in quickly finding an aiming point. The thickness of, and spacing between, the cross-hairs can be based upon an easy to learn inches of angle (or centimeters of	An optical disc or wafer containing a network of fine lines or fibers used to help a shooter aim at a target.	<i>Intrinsic evidence</i> U.S. Patent No. 5,920,995 – (1) Summary of Invention (Col. 3, ll. 16-ll. 23) – “In another embodiment, the present invention provides a reticle for use in any conventional telescopic gunsight, whether such telescopic gunsight is a fixed power scope or a variable power scope. A reticle of this embodiment is preferably constructed from an optically transparent wafer or disc having an optical center which coincides with a center of a field of vision when the wafer is mounted in a scope.” (<i>See also</i> 595 Patent, Col. 3, ll. 20-28). (2) Detailed Description of the Invention - (Col. 4, ll. 43-54) – “Finally, a reticle is typically included to assist the shooter in hitting the target. The reticle is typically (but not necessarily) constructed using optical material, such as optical glass or plastic, and takes the form of a disc or wafer with substantially parallel sides. In a fixed power scope, the reticle can be mounted anywhere

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			<p>angle) scale, or upon any other conventional scale, which can be the same or different from the scale used for the rangefinder. The rangefinder can be formed from vertical and horizontal arms. The vertical rangefinder arm can be superimposed over the primary vertical cross-hair and the horizontal rangefinder arm can be superimposed over the primary horizontal cross-hair as desired to provide a clearer field of vision.”</p> <p>(2) Detailed Description of the Invention – (Col. 5, ll. 52 to 56) – “As shown in FIG. 2, the preferred reticle 18 of the present invention is formed from a substantially flat disc or wafer 19 formed from Substantially transparent optical glass or other material Suitable for manufacturing optical lenses. Disc 19 has two, Substantially parallel, sides.”</p> <p>Also Figs. 1, 2 of the ‘595 patent</p> <p><i>Extrinsic Evidence</i></p> <p>Reticle: a grid or pattern placed in the eyepiece of an optical instrument, used to establish scale or position. <i>The American Heritage College Dictionary, Third Edition</i> (1993) at 1165.</p>		<p>between the ocular lens 14 and the objective lens 12. In a variable power scope, the reticle is most preferably mounted between the objective lens 12 and the optical components 16. In this position, the apparent size of the reticle when viewed through the ocular lens will vary with the power; for example, compare FIG. 2 (high power) with FIG. 3 (low power).” (<i>See also</i> 595 Patent, col. 5, ll. 30-41).</p> <p>U.S. Patent No. 8,707,608 -</p> <p>(1) Summary of Invention (Col. 3, ll. 41-45) - “The present invention provides reticles that provide means for selecting secondary aiming points that accurately target an intended target at any desired range, including extreme distances.” (<i>See also</i> 806 Patent, col. 3, ll. 45-48).</p> <p>(2) Detailed Description of the Invention – (Col. 12, ll. 54-64) – “Finally, a reticle assists the shooter in hitting the target. The reticle is typically (but not necessarily) constructed using optical material, such as optical glass or plastic, or similar transparent material, and takes the form of a disc or wafer with substantially parallel sides. The reticle may, for example, be constructed from wire, spider web, nano-wires, an etching, or may be analog or digitally printed, or may be projected on a surface by, for example, a mirror, video, holographic projection, or other suitable means on one or more wafers of material.” (<i>See also</i> 806 Patent, Col. 12, l.</p>

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					63-Col. 12, l. 5). <i>Extrinsic evidence</i> Reticle: a system of marks located in the focal plane of an optical instrument or on the light shield of a cathode-ray oscilloscope, used to aid in sighting, aligning, or measuring. <i>Academic Press Dictionary of Science and Technology</i> , (1992), s.v. “reticle.” Reticle: Marks or patterns placed in the focal plane of the objective of an optical instrument which appear to the observer to be superimposed upon the field of view. They are used as a reference point for sighting or aiming; to measure angular distance between two points; to determine the center of the field; or to assist in the gaging of distance, determining leads, or measurement. The reticle may be a pair of crosslines composed of fine wire or may be etched on a glass plate with plane parallel surfaces. If it is etched on glass, the entire piece of glass is referred to as the reticle. (References omitted) <i>Elementary Optics and Application to Fire Control Instruments, Department of the Army Technical Manual</i> (1977)
Cross-hair	’595: 1 ’806: 1, 3, 27 and 29	Markings on a reticle used to establish scale or position	<i>Intrinsic evidence:</i> U.S. Patent No. 6,453,595 – (1) Abstract – “An improved telescopic gunsight is provided by combining a	A continuous line or fiber in a reticle that intersects at least a second cross-hair to create an aiming point.	<i>Intrinsic evidence</i> U.S. Patent No. 5,920,995 - (1) Background of the invention “The cross-hairs of such scopes are typically

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	'608: 1, 3, 27 and 29		<p>conventional telescopic gunsight with a reticle having a primary vertical cross-hair, a primary horizontal cross-hair intersecting the primary vertical cross-hair, a plurality of secondary horizontal cross-hairs having predetermined thickness evenly spaced a predetermined distance along the primary vertical cross-hair, a plurality of secondary vertical cross-hairs having predetermined thickness evenly spaced a predetermined distance along at least some of the secondary horizontal cross-hairs and an optical range-finder for quickly determining the range to the intended target. Some of the secondary horizontal cross-hairs are marked with a unique identifying character to assist the shooter in quickly finding an aiming point. The thickness of, and spacing between, the cross-hairs can be based upon an easy to learn inches of angle (or centimeters of angle) scale, or upon any other conventional scale, which can be the same or different from the scale used for the rangefinder. The rangefinder can be formed from vertical and horizontal arms. The vertical rangefinder arm can be superimposed over the primary vertical cross-hair and the horizontal rangefinder arm can be superimposed over the primary horizontal cross-hair as desired to provide a clearer field of vision.”</p> <p>(2) Detailed Description of the Invention – (Col. 5, ll. 52 to 67) – “As shown in FIG. 2, the preferred reticle 18 of the present invention is formed from a substantially flat disc or wafer 19 formed from Substantially</p>		<p>located in the center of the field, with the vertical hair providing a central indicator for making a windage adjustment, and the horizontal hair providing a central indicator for making a bullet drop adjustment.” (Col 1, ll. 44-49). (<i>See also</i> 595 Patent, col. 1, ll. 50-54; 608 Patent, col. 2: ll. 18-22; 806 Patent, col. 2, ll. 21-23).</p> <p>Also, Figs. 2, 3, 6, and 7 of 995 Patent.</p> <p>U.S. Patent No. 6,453,595 -</p> <p>(1) Abstract – “An improved telescopic gunsight is provided by combining a conventional telescopic gunsight with a reticle having a primary vertical cross-hair, a primary horizontal cross-hair intersecting the primary vertical cross-hair ...”</p> <p>(2) Background of Invention (see above).</p> <p>(3) Summary of Invention (Col. 3, ll. 27-34) - “A primary vertical cross-hair having a predetermined thickness bisects the disc, intersecting the optical center of the disc. A primary horizontal cross-hair having a predetermined thickness intersects the primary vertical cross-hair, most preferably</p>

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			<p>transparent optical glass or other material Suitable for manufacturing optical lenses. Disc 19 has two, Substantially parallel, sides. A primary vertical cross-hair 20 is provided on one side of said disc 19 using conventional methods Such as, for example, etching, printing, or applying hairs or wires of known diameter. Etching is preferred. Primary vertical cross-hair 20 prefer ably bisects the disc 19 and intersects the optical center 21 of reticle 18. A primary horizontal cross-hair 22 is also provided, and most preferably intersects the primary vertical cross-hair at a position well above the optical center 21. Positioning the primary horizontal cross-hair in this way provides the necessary additional field of view necessary to shoot accurately at long ranges.”</p> <p>Also Fig. 2 of the ‘595 patent</p>		<p>above the optical center of the disc, to form an upper right quadrant, an upper left quadrant, a lower left quadrant, and a lower right quadrant.”</p> <p>Also, Figs. 2, 3, 6, 7, 9-15 of 595 Patent.</p> <p>U.S. Patent No. 8,966,806 and U.S. Patent No. 8,707,608 -</p> <p>(1) Background of Invention (see above).</p> <p>(2) Summary of Invention</p> <p>(a) (806 Patent, col. 4, ll. 11-15; 608 Patent, Col. 4, ll. 8-12) – “The crosshairs may be of any length, width and may comprise contiguous lines are (sic) may have gaps. In some embodiments, the secondary horizontal and vertical crosshairs comprise intersecting continuous lines so as to form a grid.”</p> <p>(b) (608 Patent, col. 4, ll. 50-58 and 806 Patent, col. 4, ll. 53-61) – “In one embodiment, a primary vertical cross-hair having a predetermined thickness bisects the disc, intersecting the optical center of the disc, or intersecting at a point offset from the optical center of the disc. In another</p>

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					<p>embodiment, a primary horizontal cross-hair having a predetermined thickness intersects the primary vertical cross-hair, most preferably above the optical center of the disc, to form an upper right sector (for example, quadrant), an upper left sector, a lower right sector, and a lower left sector.”</p> <p>Also, Figs. 2, 3, 6, 7, 9-15, 19A-C, 22-35A, 36-38 of the 608 Patent and 806 Patent.</p> <p><i>Extrinsic evidence</i></p> <p>Crosshair: a straight line that establishes the line of sight in a surveying telescope or other sighting instrument; usually one of a pair of such lines intersecting at the center of the field of vision. <i>Academic Press Dictionary of Science and Technology</i> (1992), s.v. “crosshair.”</p> <p>Cross hairs: 1. Also called cross wires. Fine wires or fibers, strands of spider web, or the like, crossing in a focal plane of an optical instrument to center a target or object or to define a line of sight. <i>Webster’s Encyclopedic Unabridged Dictionary of the English Language</i> (1996), s.v. “cross hairs.”</p> <p>Cross hair: one of the fine wires or spider lines mounted as a reticle in the focus of the eyepiece of optical instruments and used as a reference line in the field or for marking the instrumental axis. <i>Webster’s Third New International Dictionary Unabridged</i> (1986),</p>

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					s.v. “cross hair.” Expert Declaration of Carl Taylor
Primary vertical cross-hair	’595:1 ’806: 1, 3, 27 and 29 ’608: 1, 3, 27 and 29	Plain meaning	<p><i>Intrinsic evidence</i></p> <p>U.S. Patent No. 6,453,595 –</p> <p>(1) Background – (Col. 2., ll. 1-7) “U.S. Pat. No. 3,948,587 to Rubbert discloses a reticle and telescope gunsight System having primary cross-hairs which intersect conventionally at the center of the field, and Secondary horizontal cross-hairs Spaced apart by different amounts to form a rangefinder and distinct aiming apertures and points, based upon a predetermined, estimated size of a target.”</p> <p>(2) Summary - (Col. 3, ll. 23 to 33) “A reticle of this embodiment is preferably constructed from an optically transparent wafer or disc having an optical center which coincides with a center of a field of vision when the wafer is mounted in a Scope. A primary vertical cross-hair having a predetermined thickness bisects the disc, intersecting the optical center of the disc. A primary horizontal cross-hair having a predetermined thickness intersects the primary vertical cross-hair, most preferably above the optical center of the disc, to form an upper right quadrant, an upper left quadrant, a lower left quadrant, and a lower right quadrant.”</p> <p>Also Figs. 2, 3, 6, 7, 9-15 of the ‘595 patent</p>	The most prominent and longest vertical cross-hair on a reticle, which bisects the reticle by passing through its ocular center and intersects the primary horizontal cross-hair.	<p><i>Intrinsic evidence</i></p> <p>See above for “cross-hair”</p> <p>U.S. Patent No. 5,920,995 –</p> <p>(1) Abstract</p> <p>“An improved telescopic gunsight for long-range shooting is provided having ... a primary vertical cross-hair having a predetermined thickness intersecting the optical center of the wafer, a primary horizontal cross-hair having a predetermined thickness intersecting the primary vertical cross-hair ...” (<i>See also</i> Abstract of 595 Patent)</p> <p>(2) Summary of the Invention</p> <p>(a) (Col. 2, l. 65 – Col. 3, l. 2) - “...the reticle having an optical center, a primary vertical cross-hair intersecting the optical center of the reticle, a primary horizontal cross-hair intersecting said primary vertical cross-hair at a position above the optical center when the housing is mounted to the gun barrel ...” (<i>See also</i> 595 Patent, col. 3, ll. 3-8).</p> <p>(b) (Col. 3: ll. 23-25) - “A primary vertical cross-hair having a predetermined thickness bisects the disc, intersecting the optical</p>

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					<p>center of the disc.” (<i>See also</i> 595 Patent, col. 3, ll. 28-30).</p> <p>(3) Detailed Description of the Invention (Col. 5: ll. 5-7) - “Primary vertical cross-hair 20 preferably bisects the disc 19 and intersects the optical center 21 of reticle 18.” (<i>See also</i> 595 Patent, col. 5, ll. 60-62)</p> <p>(4) Figs. 2, 3, 6, and 7 of 995 Patent, Figs. 2, 3, 6, 7, 10-15 of 595 Patent.</p> <p>U.S. Patent No. 7,856,750 –</p> <p>(1) Summary of the Invention –</p> <p>(a) (Col. 3, ll. 60-63) – “...wherein the aiming points are formed by a primary vertical cross-hair intersecting the optical center of the reticle...” (<i>See also</i> 608 Patent, col. 3, l. 66 – col. 4, l. 1; and 806 Patent, col. 4, ll. 2-4).</p> <p>(b) (Col. 4, ll. 9-16) – “In a further embodiment, the primary horizontal cross-hair intersects that primary vertical cross-hair at the optical center of the reticle. In another embodiment, the primary horizontal cross-hair intersects that primary vertical cross-hair below the optical center of the reticle. In a preferred embodiment, the primary horizontal cross-hair intersects that primary vertical cross-hair above the optical center of the reticle.” (<i>See also</i> 608 Patent, col. 4, ll. 14-21 and 806 Patent, col. 4, ll. 17-24).</p>

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					<p>(c) (Col. 4, ll. 46-54) – “In one embodiment, a primary vertical cross-hair having a predetermined thickness bisects the disc, intersecting the optical center of the disc, or intersecting at a point offset from the optical center of the disc. In another embodiment, a primary horizontal cross-hair having a predetermined thickness intersects the primary vertical cross-hair, most preferably above the optical center of the disc, to form an upper right sector (for example, quadrant), an upper left sector, a lower right sector, and a lower left sector.” (See also 608 Patent, col. 4, ll. 50-58 and 806 Patent, col. 4, ll. 53-61).</p> <p>Also, Figs. 2, 3, 9-15, 19, 22-34 and 36-37 of the 750, 608 Patent and 806 Patents.</p> <p><i>Extrinsic evidence</i></p>
Intersecting/ intersection	<p>’595: 1</p> <p>’806: 1, 3, 27 and 29</p> <p>’608: 1, 3, 27 and 29</p>	<p>To cut across or through; the act, process, or result of intersecting (dashed or other interrupted lines may intersect at a gap or interruption)</p>	<p><i>Intrinsic evidence</i></p> <p>U.S. Patent No. 6,453,595 –</p> <p>(1) Background – (Col. 2., ll. 1-7) “U.S. Pat. No. 3,948,587 to Rubbert discloses a reticle and telescope gunsight System having primary cross-hairs which intersect conventionally at the center of the field, and Secondary horizontal cross-hairs Spaced apart by different amounts to form a rangefinder and distinct aiming apertures and points, based upon a predetermined, estimated size of a target.”</p>	<p>A crossing of two or more things</p> <p>A point at which two or more things cross</p>	<p><i>Intrinsic evidence</i></p> <p>U.S. Patent No. 5,920,995 –</p> <p>(1) Abstract</p> <p>“...a primary horizontal cross-hair having a predetermined thickness intersecting the primary vertical cross-hair ...” (See also Abstract of 595 Patent)</p> <p>(2) Summary of the Invention</p>

Claim Term	Claim Nos.	Plaintiffs' Proposed Claim Construction	Plaintiffs' Intrinsic and Extrinsic Evidence	Defendant's Proposed Claim Construction	Defendant's Intrinsic and Extrinsic Evidence
			<p>(2) Summary of the Invention – (Col. 3, ll. 21 to 46) “In another embodiment, the present invention provides a reticle for use in any conventional telescopic gunsight, whether such telescopic gunsight is a fixed power scope or a variable power scope. A reticle of this embodiment is preferably constructed from an optically transparent wafer or disc having an optical center which coincides with a center of a field of vision when the wafer is mounted in a scope. A primary vertical cross-hair having a predetermined thickness bisects the disc, intersecting the optical center of the disc. A primary horizontal cross-hair having a predetermined thickness intersects the primary vertical cross-hair, most preferably above the optical center of the disc, to form an upper right quadrant, an upper left quadrant, a lower left quadrant, and a lower right quadrant. A plurality of secondary horizontal cross-hairs having predetermined thickness are evenly spaced along the primary vertical cross-hair. Preferably, at least some of these secondary horizontal cross-hairs are identified with a unique identifier, to aid the shooter in locating the appropriate horizontal cross-hair to use in selecting an aiming point. A plurality of secondary vertical cross-hairs having predetermined thickness are evenly spaced along at least some of said secondary horizontal cross-hairs to aid in making accurate windage adjustments. Finally, a separate range-finding means is positioned in</p>		<p>(Col. 2, l. 65 – col. 3, l. 2) - “...a primary horizontal cross-hair intersecting said primary vertical cross-hair at a position above the optical center when the housing is mounted to the gun barrel ...” (<i>See also</i> 595 Patent, col. 3, ll. 3-8).</p> <p>U.S. Patent No. 7,856,750 –</p> <p>(1) Summary of the Invention –</p> <p>(a) (Col. 4, ll. 9-16) – “In another embodiment, the primary horizontal cross-hair intersects that primary vertical cross-hair below the optical center of the reticle. In a preferred embodiment, the primary horizontal cross-hair intersects that primary vertical cross-hair above the optical center of the reticle.” (<i>See also</i> 608 Patent, col. 4, ll. 14-21; and 806 Patent, col. 4, ll. 17-24).</p> <p>(b) (Col. 4, ll. 46-54) – “In another embodiment, a primary horizontal cross-hair having a predetermined thickness intersects the primary vertical cross-hair, most preferably above the optical center of the disc, to form an upper right sector (for example, quadrant), an upper left sector, a lower right sector, and a lower left sector.” (<i>See also</i> 608 Patent, col. 4, ll. 50-58; and 806 Patent, col. 4, ll. 53-61).</p> <p><i>Also</i>, Figs. 2, 3, 9-15, 19, 22-34 and 36-37 of the 750, 608 and 806 Patents.</p>

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			<p>one of said quadrants to aid the shooter in determining the range to target.”</p> <p>Also, Figs 2, 3, 6, 7, 9-15 of the '595 Patent.</p> <p>Extrinsic Evidence</p> <p>Intersect: 1. To cut across of through. 2. To form an intersection with; cross. <i>The American Heritage College Dictionary, Third Edition (1993) at 711.</i></p> <p>Intersection: 1. The act, process, or result of intersecting. 2. A place where things, esp. roads, intersect. 3. <i>Math.</i> a. The point or locus of points where one line, surface, or solid crosses another. b. A set that contains elements shared by two or more given sets. <i>The American Heritage College Dictionary, Third Edition (1993) at 711.</i></p>		<p>Extrinsic evidence</p> <p>Intersect: 1. to cut or divide by passing through or across. 2. To cross, as lines or wires. <i>Webster's Encyclopedic Unabridged Dictionary of the English Language (1996), s.v. "intersect."</i></p> <p>Intersect: 1. to pierce or divide by passing through or across. <i>Webster's Third New International Dictionary Unabridged, (1986), s.v. "intersect."</i></p> <p>Intersect: 1. to cross or pass through, as a pair of lines. <i>Academic Press Dictionary of Science and Technology, (1992), s.v. "intersect."</i></p> <p>Intersection: 1. an act, state, or place of intersecting <i>Webster's Third New International Dictionary Unabridged, (1986), s.v. "intersection."</i></p> <p>Intersection: the place where two or more things intersect; <i>Academic Press Dictionary of Science and Technology, (1992), s.v. "intersection."</i></p>
Rangefinder markings/ rangefinding markings	'595: 1 '806: 29 '608: 29	Additional markings on a reticle that permit a user to determine the distance to a target	<p>Intrinsic evidence</p> <p>U.S. Patent No. 6,453,595 –</p> <p>(1) Abstract – “An improved telescopic gunsight is provided by combining a conventional telescopic gunsight with a reticle having a primary vertical cross-hair, a</p>	Markings in standard units of measure that are used to determine the distance to a target.	<p>Intrinsic evidence</p> <p>U.S. Patent No. 5,920,995 –</p> <p>(1) Summary of the Invention</p> <p>(a) (Col. 3, ll. 38-40) - “Finally, a separate range-finding means is positioned in one of</p>

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			<p>primary horizontal cross-hair intersecting the primary vertical cross-hair, a plurality of secondary horizontal cross-hairs having predetermined thickness evenly spaced a predetermined distance along the primary vertical cross-hair, a plurality of secondary vertical cross-hairs having predetermined thickness evenly spaced a predetermined distance along at least some of the secondary horizontal cross-hairs and an optical range-finder for quickly determining the range to the intended target. Some of the secondary horizontal cross-hairs are marked with a unique identifying character to assist the shooter in quickly finding an aiming point. The thickness of, and spacing between, the cross-hairs can be based upon an easy to learn inches of angle (or centimeters of angle) scale, or upon any other conventional scale, which can be the same or different from the scale used for the rangefinder. The rangefinder can be formed from vertical and horizontal arms. The vertical rangefinder arm can be superimposed over the primary vertical cross-hair and the horizontal rangefinder arm can be superimposed over the primary horizontal cross-hair as desired to provide a clearer field of vision.”</p> <p>(2) Background – (Col. 2., ll. 1-7) “U.S. Pat. No. 3,948,587 to Rubbert discloses a reticle and telescope gunsight System having primary cross-hairs which intersect conventionally at the center of the field, and Secondary horizontal cross-hairs Spaced apart by different amounts to form a</p>		<p>said quadrants to aid the shooter in determining the range to target.” (<i>See also</i> 595 Patent, col. 3, ll. 43-45).</p> <p>(2) Detailed Description of Invention (Col. 5, ll. 36-45) – “Also provided, most preferably in the lower left quadrant, is a means for determining range. As shown in FIG. 2, the rangefinder 30 includes a vertical arm 32 and an intersecting horizontal arm 34. Vertical arm 32 is provided with a plurality of evenly-spaced horizontal cross-hairs which intersect vertical arm 32; horizontal arm 34 is provided with a plurality of evenly-spaced, preferably downwardly extending cross-hairs. At least some of the range finding cross-hairs are marked to correspond to a scale useful for determining range.” (<i>See also</i> 595 Patent, col. 6, ll. 23-33).</p> <p>U.S. Patent No. 8,966,806 and U.S. Patent No. 8,707,608 -</p> <p>(1) Brief Description of Drawings</p> <p>(a) (806 Patent: col. 7, l. 57-col. 8, l. 11; 608 Patent: col. 7, l. 50 – col. 8, l. 3) – “FIG. 11 is a front view of a reticle of the present invention including a circumscribing ring, the spacing of the markings based upon an “inch of angle” (IOA™) scale;</p> <p>FIG. 12 is a front view of a reticle of the present invention including a circumscribing ring and an aiming dot located at the optical center, the spacing and the markings based</p>

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			<p>rangefinder and distinct aiming apertures and points, based upon a predetermined, estimated size of a target.”</p> <p>(3) Summary of the Invention –</p> <p>(a) (Col. 3, ll. 3 to 14) “the reticle having ... rangefinder markings positioned in one of the quadrants.”</p> <p>(b) (Col. 3, ll. 44 to 46) “Finally, a separate range-finding means is positioned in one of Said quadrants to aid the Shooter in determining the range to target.”</p> <p>(c) (Col. 3, ln. 66 to Col. 4 ln. 3) “In yet another embodiment, a portion of the primary Vertical cross-hair or the primary horizontal cross-hair can be provided with rangefinder markings to eliminate the need for a separate rangefinder in one of the quadrants formed by the primary vertical and horizontal cross-hair.”</p> <p>(3) Detailed Description of the Invention – (Col. 10, ll. 32-34) “The preferred rangefinder, shown in FIG. 2, can easily be used to accurately determine the range to a target whose size is known or can be estimated.”</p> <p><i>Also, Figs 2, 13-15 of the ‘595 Patent.</i></p>		<p>upon an “inch of angle” (IOA™) scale;</p> <p>FIG. 13 is a front view of a reticle of the present invention in which the upper portion of the primary vertical cross-hair and the primary horizontal cross-hair have been provided with rangefinder markings of a United States Marine Corps Mil Radians scale, (where a circle equals 6,283 Mils/circle); or it may be calibrated in United States Army Mil scale (6,400 Mils/circle), or other Mil scale (e.g. 6000 mil/circle, 9000 mil/circle), or European, Russian, or other variations of the Mil scale.</p> <p>FIG. 14 is a front view of a reticle of the present invention in which the upper portion of the primary vertical cross-hair and the primary horizontal cross-hair have been provided with rangefinder markings of an “inches of angle” (IOA™) scale;”</p> <p>(b) (Col. 18, ll. 19-65) - “A plurality of secondary vertical cross-hairs or hash-marks 26 are provided on at least some of the secondary horizontal cross-hairs 24, to aid the shooter in making adjustments for windage and for locating an appropriate aiming point on the reticle with respect to both windage and range. In one embodiment the at least some of the secondary, vertical crosshairs are evenly spaced. In a further embodiment, the at least some of the secondary, vertical cross-hairs are unevenly spaced.</p>

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					<p>Also provided on the reticle is a means for determining range. As shown in FIG. 2, the rangefinder 30 can be provided in one of the sectors formed by the primary vertical and horizontal cross-hairs, and can include a vertical arm 32 and an intersecting horizontal arm 34. Vertical arm 32 is provided with a plurality of evenly-spaced horizontal cross-hairs which intersect vertical arm 32; horizontal arm 34 is provided with a plurality of evenly-spaced, preferably downwardly extending cross-hairs. At least some of the range finding cross-hairs are marked to correspond to a scale useful for determining range.</p> <p>The spacing between the range-finding cross-hairs can be based upon a non-conventional scale, which can be referred to as the "inches of angle" (IOA TM) scale. An "inch of angle" is defined as the angle made (or the distance on the reticle) which covers, or subtends, exactly one inch at 100 yards which is referred to as a "shooter's minute of angle" (SMOA TM). On the reticle shown in FIG. 2, an inch of angle is the distance between any two adjacent rangefinder crosshairs. That is, the space between any two adjacent rangefinder cross-hairs will cover or exactly contain a one-inch target at 100 yards. A similar scale for metric shooters, which is called a "centimeters of angle" (COATM) scale, can also be used, with a centimeter of angle being the distance on the reticle that covers exactly one centimeter at 100 meters. Conventional scales, such as the "minute of</p>

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					<p>angle” scale (true minute/angle) or Mil Radian scale (6,283 Mils/circle, 6,400 Mils/circle, or any other Mils/circle system), can also be used, although they are less intuitive to use and make the accurate estimation of long ranges more difficult.</p> <p>In one embodiment, the spacings between secondary cross-hairs on the primary vertical and horizontal cross-hairs are also determined with reference to the scale used for the rangefinder. In a further embodiment, the spacings between secondary cross-hairs on the primary vertical and horizontal cross-hairs are independent with reference to the scale used for the rangefinder.”</p> <p>(c) (Col. 19, ll. 24-34) - “As shown in FIGS. 13-15, the rangefinder can be positioned at any convenient site in the reticle. It is possible to use the primary vertical cross-hair 20 and/or primary horizontal cross-hair 22 as the rangefinder, obviating the need for additional lines in any sector formed by the intersecting primary vertical and horizontal cross-hairs. This is preferred because it provides a less cluttered, and therefore less distracting, field of view.</p> <p>As shown in FIG. 13, the upper portion of the primary vertical cross-hair 20 can be provided with rangefinder markings of any scale to form a rangefinder vertical arm 32.</p>

U.S. Patent No. 9,335,123 ('123 Patent)

Claim Term	Claim Nos.	Plaintiff's Proposed Claim Construction	Plaintiffs' Intrinsic and Extrinsic Evidence	Defendant's Proposed Claim Construction	Defendant's Intrinsic and Extrinsic Evidence
Reticle	1, 3, 13, 17, 22, 85, 87, 97 and 110	Component in the eyepiece of an optical instrument comprising markings used to establish scale or position.	<p><i>Intrinsic evidence</i></p> <p>U.S. Patent No. 6,453,595 – (1) Abstract – “An improved telescopic gunsight is provided by combining a conventional telescopic gunsight with a reticle having a primary vertical cross-hair, a primary horizontal cross-hair intersecting the primary vertical cross-hair, a plurality of secondary horizontal cross-hairs having predetermined thickness evenly spaced a predetermined distance along the primary vertical cross-hair, a plurality of secondary vertical cross-hairs having predetermined thickness evenly spaced a predetermined distance along at least some of the secondary horizontal cross-hairs and an optical range-finder for quickly determining the range to the intended target. Some of the secondary horizontal cross-hairs are marked with a unique identifying character to assist the shooter in quickly finding an aiming point. The thickness of, and spacing between, the cross-hairs can be based upon an easy to learn inches of angle (or centimeters of angle) scale, or upon any other conventional scale, which can be the same or different from the scale used for the rangefinder. The rangefinder can be formed from vertical and horizontal arms. The vertical rangefinder arm can be superimposed over the primary vertical cross-hair and the horizontal rangefinder arm can be superimposed over</p>	An optical disc or wafer containing a network of fine lines or fibers used to help a shooter aim at a target.	<p><i>Intrinsic evidence</i></p> <p>U.S. Patent No. 9,335,123 – (Col. 3, ll. 40-44) – “The present invention provides reticles that provide means for selecting secondary aiming points that accurately target an intended target at any desired range, including extreme distances.” (Col. 18, ll. 4-13) – “Finally, a reticle assists the shooter in hitting the target. The reticle is typically (but not necessarily) constructed using optical material, such as optical glass or plastic, or similar transparent material, and takes the form of a disc or wafer with substantially parallel sides. The reticle may, for example, be constructed from wire, spider web, nano-wires, an etching, or may be analog or digitally printed, or may be projected (for example, on a surface) by, for example, a mirror, video, holographic projection, or other suitable means on one or more wafers of material.</p> <p><i>Extrinsic evidence</i></p> <p>Reticle: a system of marks located in the focal plane of an optical instrument or on the light shield of a cathode-ray oscilloscope, used to aid in sighting, aligning, or measuring. Academic Press Dictionary of Science and Technology (1992),</p>

Claim Term	Claim Nos.	Plaintiff's Proposed Claim Construction	Plaintiffs' Intrinsic and Extrinsic Evidence	Defendant's Proposed Claim Construction	Defendant's Intrinsic and Extrinsic Evidence
			<p>the primary horizontal cross-hair as desired to provide a clearer field of vision.”</p> <p>(2) Detailed Description of the Invention – (Col. 5, ll. 52 to 56) “As shown in FIG. 2, the preferred reticle 18 of the present invention is formed from a substantially flat disc or wafer 19 formed from Substantially transparent optical glass or other material Suitable for manufacturing optical lenses. Disc 19 has two, Substantially parallel, sides.”</p> <p><i>Also, Figs. 1, 2 of the ‘595 Patent.</i></p> <p>Extrinsic Evidence</p> <p>Reticle: a grid or pattern placed in the eyepiece of an optical instrument, used to establish scale or position. <i>The American Heritage College Dictionary, Third Edition (1993) at 1165.</i></p>		<p>s.v. “reticle.”</p> <p>Reticle: Marks or patterns placed in the focal plane of the objective of an optical instrument which appear to the observer to be superimposed upon the field of view. They are used as a reference point for sighting or aiming; to measure angular distance between two points; to determine the center of the field; or to assist in the gaging of distance, determining leads, or measurement. The reticle may be a pair of crosslines composed of fine wire or may be etched on a glass plate with plane parallel surfaces. If it is etched on glass, the entire piece of glass is referred to as the reticle. (References omitted)</p> <p>ELEMENTARY OPTICS AND APPLICATION TO FIRE CONTROL INSTRUMENTS, DEPARTMENT OF THE ARMY TECHNICAL MANUAL, at B-27 (1977)</p>
Rangefinder	110	Additional markings on a reticle that permit a user to determine the distance to a target	<p>Intrinsic evidence</p> <p>U.S. Patent No. 6,453,595 –</p> <p>(1) Abstract – “An improved telescopic gunsight is provided by combining a conventional telescopic gunsight with a reticle having a primary vertical cross-hair, a primary horizontal cross-hair intersecting the primary vertical cross-hair, a plurality of secondary horizontal cross-hairs having predetermined thickness evenly spaced a predetermined distance along the primary</p>	<p>Markings in standard units of measure that are used to determine the distance to a target.</p>	<p>Intrinsic evidence</p> <p>U.S. Patent No. 9,335,123 -</p> <p>(1) Summary of Invention (Col. 4, l. 67 – col. 5, l. 2) – “In a further embodiment a separate range-finding means is positioned on the reticle to aid the shooter in determining the range to target.”</p> <p>(2) Detailed Description of Invention (Col.</p>

Claim Term	Claim Nos.	Plaintiff's Proposed Claim Construction	Plaintiffs' Intrinsic and Extrinsic Evidence	Defendant's Proposed Claim Construction	Defendant's Intrinsic and Extrinsic Evidence
			<p>vertical cross-hair, a plurality of secondary vertical cross-hairs having predetermined thickness evenly spaced a predetermined distance along at least some of the secondary horizontal cross-hairs and an optical range-finder for quickly determining the range to the intended target. Some of the secondary horizontal cross-hairs are marked with a unique identifying character to assist the shooter in quickly finding an aiming point. The thickness of, and spacing between, the cross-hairs can be based upon an easy to learn inches of angle (or centimeters of angle) scale, or upon any other conventional scale, which can be the same or different from the scale used for the rangefinder. The rangefinder can be formed from vertical and horizontal arms. The vertical rangefinder arm can be superimposed over the primary vertical cross-hair and the horizontal rangefinder arm can be superimposed over the primary horizontal cross-hair as desired to provide a clearer field of vision.”</p> <p>(2) Background – (Col. 2., ll. 1-7) “U.S. Pat. No. 3,948,587 to Rubbert discloses a reticle and telescope gunsight System having primary cross-hairs which intersect conventionally at the center of the field, and Secondary horizontal cross-hairs Spaced apart by different amounts to form a rangefinder and distinct aiming apertures and points, based upon a predetermined, estimated size of a target.”</p> <p>(3) Summary of the Invention –</p>		<p>23, ll. 36-46) – “Also provided on the reticle is a means for determining range. As shown in FIG. 2, the rangefinder 30 can be provided in one of the sectors formed by the primary vertical and horizontal cross-hairs, and can include a vertical arm 32 and an intersecting horizontal arm 34. Vertical arm 32 is provided with a plurality of evenly-spaced horizontal cross-hairs which intersect vertical arm 32; horizontal arm 34 is provided with a plurality of evenly-spaced, preferably downwardly extending cross-hairs. At least some of the range finding cross-hairs are marked to correspond to a scale useful for determining range.</p> <p>(3) Brief Description of Drawings</p> <p>(a) (Col. 9, ll. 45-65) – “FIG. 11 is a front view of a reticle of the present invention including a circumscribing ring, the spacing of the markings based upon an "inch of angle" (IOA™) scale;</p> <p>FIG. 12 is a front view of a reticle of the present invention including a circumscribing ring and an aiming dot located at the optical center, the spacing and the markings based upon an “inch of angle” (IOA™) scale;</p> <p>FIG. 13 is a front view of a reticle of the present invention in which the upper portion of the primary vertical cross-hair and the primary horizontal cross-hair have been provided with rangefinder markings of a United States Marine Corps Mil Radians</p>

Claim Term	Claim Nos.	Plaintiff's Proposed Claim Construction	Plaintiffs' Intrinsic and Extrinsic Evidence	Defendant's Proposed Claim Construction	Defendant's Intrinsic and Extrinsic Evidence
			<p>(a) (Col. 3, ll. 3 to 14) “the reticle having ... rangefinder markings positioned in one of the quadrants.”</p> <p>(b) (Col. 3, ll. 44 to 46) “Finally, a separate range-finding means is positioned in one of Said quadrants to aid the Shooter in determining the range to target.”</p> <p>(c) (Col. 3, ln. 66 to Col. 4 ln. 3) “In yet another embodiment, a portion of the primary Vertical cross-hair or the primary horizontal cross-hair can be provided with rangefinder markings to eliminate the need for a separate rangefinder in one of the quadrants formed by the primary vertical and horizontal cross-hair.”</p> <p>(3) Detailed Description of the Invention – (Col. 10, ll. 32-34) “The preferred rangefinder, shown in FIG. 2, can easily be used to accurately determine the range to a target whose size is known or can be estimated.”</p> <p><i>Also</i>, Figs 2, 13-15 of the ‘595 Patent.</p>		<p>scale, (where a circle equals 6,283 Mils/circle); or it may be calibrated in United States Army Mil scale (6,400 Mils/circle), or other Mil scale (e.g. 6000 mil/circle, 9000 mil/circle), or European, Russian, or other variations of the Mil scale.</p> <p>FIG. 14 is a front view of a reticle of the present invention in which the upper portion of the primary vertical cross-hair and the primary horizontal cross-hair have been provided with rangefinder markings of an “inches of angle” (IOA TM) scale;”</p> <p>(b) (Col. 23, ll. 27- Col. 24, l. 2) - “A plurality of secondary vertical cross-hairs or hash-marks 26 are provided on at least some of the secondary horizontal cross-hairs 24, to aid the shooter in making adjustments for windage and for locating an appropriate aiming point on the reticle with respect to both windage and range. In one embodiment the at least some of the secondary, vertical crosshairs are evenly spaced. In a further embodiment, the at least some of the secondary, vertical cross-hairs are unevenly spaced.</p> <p>Also provided on the reticle is a means for determining range. As shown in FIG. 2, the rangefinder 30 can be provided in one of the sectors formed by the primary vertical and horizontal cross-hairs, and can include a vertical arm 32 and an intersecting horizontal arm 34. Vertical arm 32 is provided with a plurality of evenly-spaced horizontal cross-</p>

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					<p>hairs which intersect vertical arm 32; horizontal arm 34 is provided with a plurality of evenly-spaced, preferably downwardly extending cross-hairs. At least some of the range finding cross-hairs are marked to correspond to a scale useful for determining range.</p> <p>The spacing between the range-finding cross-hairs can be based upon a non-conventional scale, which can be referred to as the “inches of angle” (IOA TM) scale. An “inch of angle” is defined as the angle made (or the distance on the reticle) which covers, or subtends, exactly one inch at 100 yards which is referred to as a “shooter's minute of angle” (SMOA TM). On the reticle shown in FIG. 2, an inch of angle is the distance between any two adjacent rangefinder crosshairs. That is, the space between any two adjacent rangefinder cross-hairs will cover or exactly contain a one-inch target at 100 yards. A similar scale for metric shooters, which is called a “centimeters of angle” (COATM) scale, can also be used, with a centimeter of angle being the distance on the reticle that covers exactly one centimeter at 100 meters. Conventional scales, such as the “minute of angle” scale (true minute/angle) or Mil Radian scale (6,283 Mils/circle, 6,400 Mils/circle, or any other Mils/circle system), can also be used, although they are less intuitive to use and make the accurate estimation of long ranges more difficult.</p> <p>In one embodiment, the spacings between</p>

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					<p>secondary cross-hairs on the primary vertical and horizontal cross-hairs are also determined with reference to the scale used for the rangefinder. In a further embodiment, the spacings between secondary cross-hairs on the primary vertical and horizontal cross-hairs are independent with reference to the scale used for the rangefinder.”</p> <p>(c) (Col. 24, ll. 32-50) - “As shown in FIGS. 13-15, the rangefinder can be positioned at any convenient site in the reticle. It is possible to use the primary vertical cross-hair 20 and/or primary horizontal cross-hair 22 as the rangefinder, obviating the need for additional lines in any sector formed by the intersecting primary vertical and horizontal cross-hairs. This is preferred because it provides a less cluttered, and therefore less distracting, field of view.</p> <p>As shown in FIG. 13, the upper portion of the primary vertical cross-hair 20 can be provided with rangefinder markings of any scale to form a rangefinder vertical arm 32. Likewise, substantially the entire primary horizontal cross-hair 22 can be provided with rangefinder markings of any scale to form a rangefinder horizontal arm 34. Typical scales include the “inches of angle” or “centimeters of angle” scale introduced by the parent and grandparent applications from which this application claims priority, as well as conventional scales such as USMC Mil Radian scale, US Army Mil Radian scale, 50</p>

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					or minute of angle scales can also be used.